

What is claimed is:

- 1 *Sub* 1. A method for manufacturing a multi-layered ceramic substrate,
2 *22* said method comprising the steps of:
3 forming a shrinkage suppression sheet on both faces of an unfired
4 green sheet laminated body;
5 firing said green sheet laminated body on which said shrinkage
6 suppression sheet is formed on its both faces; and
7 removing said shrinkage suppression sheet by spraying at least one
8 of ceramic powder and water together with compressed air onto said shrinkage
9 suppression sheet on both faces of said green sheet laminated body after firing.
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1 2. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein said ceramic powder is made of the same material
3 as the main constituent of a material used for said shrinkage suppression sheet.
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1 3. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein the sintering temperature of said shrinkage
3 suppression sheet is higher than the sintering temperature of said green sheet
4 laminated body.
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1 4. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein the pressure of said compressed air is between 3.0
3 and 5.5 kgf/cm².
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Sub 03
1 5. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein a mean particle size of said ceramic powder is not
3 greater than 10 μm .
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1 6. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein a mean particle size of said ceramic powder is
3 between 0.1 and 150 μm .
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Sub 03
1 7. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein at least one of said ceramic powder and water is
3 sprayed together with compressed air onto said shrinkage suppression sheet on
4 both faces of said green sheet laminated body simultaneously after firing.
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1 8. The method for manufacturing a multi-layered ceramic substrate
2 as defined in Claim 1, wherein said sprayed ceramic powder is collected for reuse
3 in spraying.
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1 9. A method for manufacturing a multi-layered ceramic substrate in
2 which a shrinkage suppression sheet is formed on both faces of unfired laminated
3 green sheets before firing, and said shrinkage suppression sheet is removed after
4 sintering; wherein said shrinkage suppression sheet is removed by spraying at least
5 one of water, ceramic powder, and a mixture of ceramic powder and water together
6 with compressed air.
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